

Title (en)

Drive control device for a stepper motor and drive control method of the stepper motor

Title (de)

Fahrsteuerungsvorrichtung für einen Schrittmotor und Fahrsteuerungsverfahren für einen Schrittmotor

Title (fr)

Dispositif de contrôle de commande pour moteur pas à pas et procédé de contrôle de commande pour le moteur pas à pas

Publication

EP 2075589 A3 20140101 (EN)

Application

EP 08172771 A 20081223

Priority

JP 2007337278 A 20071227

Abstract (en)

[origin: EP2075589A2] A stepper motor control device includes a sensor (5) that detects physical quantities and a control device that operates a stepper motor (3) based on data corresponding to the physical quantities sent from the sensor (5) in which the said control device implements a target rotational angle (DA) computation process that calculates a target rotational angle (DA) of a drive shaft (3a) of the stepper motor (3) based on data corresponding to the physical quantities sent from the sensor (5), a target rotational angle change (RR) computation process that calculates a target rotational angle change (RR) which is a difference between a present rotational angle (D x-1) of the drive shaft (3 a) of the stepper motor (3) and the target rotational angle (DA) and a divisional target rotational angle (R_n) computation process that equally divides the target rotational angle change (RR) by a first divisional target rotational angle (R_n) within a range not exceeding a rotational limit for loss of synchronism of the stepper motor (3) whereby the said control device is a drive control device of the stepper motor (3) that drives the stepper motor (3) by supplying to the stepper motor (3) a second divisional target rotational angle (R_n) which is a value calculated by the divisional target rotational angle (R_n) computation process as a rotational angle per one control period (SS).

IPC 8 full level

G01R 7/06 (2006.01)

CPC (source: EP US)

G01R 7/06 (2013.01 - EP US)

Citation (search report)

- [XA] JP 2007228763 A 20070906 - DENSO CORP
- [A] US 6034501 A 20000307 - SATO KOUICHI [JP], et al
- [AD] JP 2004328807 A 20041118 - CALSONIC KANSEI CORP

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2075589 A2 20090701; EP 2075589 A3 20140101; EP 2075589 B1 20151007; CN 101471620 A 20090701; CN 101471620 B 20110406; JP 2009178022 A 20090806; JP 4423339 B2 20100303; US 2009167232 A1 20090702; US 8080968 B2 20111220

DOCDB simple family (application)

EP 08172771 A 20081223; CN 200810186612 A 20081211; JP 2008289978 A 20081112; US 31810108 A 20081222